Amendments to the Claims:

Claims 1-35 (Canceled)

36. (Currently amended) A transgenic mouse whose genome comprises a null endogenous limulus clotting factor protease-like allele~~; said allele comprising a coding sequence comprising the sequence of SEQ ID NO.:1; said null allele comprising exogenous DNA, said exogenous DNA comprising a gene encoding a visible marker, wherein said visible marker is capable of expression in the brain~~.
37. (Previously presented) The transgenic mouse of claim 36 wherein the mouse is heterozygous for said null allele.
38. (Previously presented) The transgenic mouse of claim 36 wherein the mouse is homozygous for said null allele.
39. (Previously presented) The transgenic mouse of claim 36, wherein the mouse exhibits, relative to a wild-type control mouse, at least one of the following phenotypes: increased sensitivity to pain and increased susceptibility to seizure.
40. (Previously presented) The transgenic mouse of claim 39, wherein the transgenic mouse exhibits a decreased latency to respond to a thermal stimulus, relative to a wild-type control mouse.
41. (Previously presented) The transgenic mouse of claim 39, wherein the transgenic mouse requires a lower dose of metrazol to reach characteristic stages of seizure.
42. (Currently amended) The transgenic mouse of claim ~~36~~ 44 wherein said null allele further comprises a ~~gene encoding a visible marker is~~ *lacZ* gene.
43. (Currently amended) The transgenic mouse of claim 36 wherein said null allele ~~further~~ comprises a gene encoding a selection marker.
44. (Previously presented) The transgenic mouse of claim 43 wherein said gene is a neomycin resistant gene.
45. (Currently amended) A method of producing the transgenic mouse of claim 36, the method comprising:
    a) providing a mouse embryonic stem cell comprising the null protease allele, said allele comprising a coding sequence comprising the sequence of SEQ ID NO:1;
    b) introducing the mouse embryonic stem cell into a blastocyst;

c) implanting the resulting blastocyst into a pseudopregnant mouse, wherein the resultant mouse gives birth to a chimeric mouse; and

d) breeding the chimeric mouse to produce the transgenic mouse.

46. (Previously presented) A method of identifying an agent capable of modulating activity of a gene comprising a coding sequence comprising the sequence of SEQ ID NO:1 or a gene expression product of said gene, the method comprising:

a) administering a putative agent to the transgenic mouse of claim 36;

b) administering the agent to a wild-type control mouse; and

c) comparing a physiological response of the transgenic mouse with that of the control mouse;

d) wherein a difference in the physiological response between the transgenic mouse and the control mouse is an indication that the agent is capable of modulating activity of the gene or gene expression product.

47. (Previously presented) The method of claim 45, wherein the physiological response is a change in latency to respond to a thermal stimulus.

48. (Previously presented) The method of claim 45, wherein the physiological response is a change in dose required for the mouse to reach characteristic stages of seizure.